UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
KHAN, ASHER R

ART UNIT	PAPER NUMBER
2621	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2009*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☐ Claim(s) *1,5-8 and 14-18* is/are rejected.
7)☐ Claim(s) *2-4, 11-13, and 19-20* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20090713

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 4/15/2009 have been fully considered but they are not persuasive.

In re page 13 line 23 to page 14 line 6, Applicants argue that Hallberg does not disclose STC (system time clock) count initialization on a PCR packet of the transport stream inputted via the transmission control unit, the demux configured to synchronize the STC count with a STC.

In response the Examiner respectfully disagrees. Hallberg discloses an STC (system time clock) count initialization (PCR value is recovered and used to synchronize system clock 55 with system clock 33; Fig. 6, 206) on a PCR (program clock reference) packet of the transport stream inputted via the transmission control unit, the demux configured to synchronize the STC count with a STC (PCR is recovered from the data stream at the receiver 12 and used to synchronize the receiver's version of the system clock 55 to the emission station's system clock i.e. count initialization on PCR)(Fig. 1b)(Col. 4, lines 53-68; Col. 5, lines 1-28);

In re page 14 line 7-13 Applicant argue that Hallberg does not disclose adjusting DTS (decoding timestamp) according to the predetermined playback mode.

In response the Examiner respectfully disagrees. Hallberg discloses adjusting DTS (decoding timestamp) (Col. 11, lines 12-48; mentions adjusting of DTS which is done after selection of frames to be displayed) according to the predetermined playback

mode (Col. 9, lines 53-59; mention order of display according to directions such as forward).

Allowable Subject Matter

Claims 2-4, 11-13, and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1, 5-8 and 14-18 are rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent 6,658,199 B1 to Hallberg in view of U.S. Patent 7,031,259 to Guttman et al. "Guttman" in further view of An MPEG-2 digital decoder design to Greg Reig "Greg"**

As to claim 1, Hallberg discloses a system recording and playing back a transport stream transmitted by a digital broadcast, a digital video record/playback apparatus comprising: an output control unit outputting a predetermined playback mode (Col. 3, lines 39-63);

a transmission control unit controlling a transmission bit rate and transmission time point of the transport stream based on the predetermined playback mode and a buffer.(Fig.

1b)(Col. 6, lines 43-68; Col. 7, lines 1-26);

a demux performing an STC (system time clock) count initialization (PCR value is recovered and used to synchronize system clock 55 with system clock 33; Fig. 6, 206) on a PCR (program clock reference) packet of the transport stream inputted via the transmission control unit, the demux configured to synchronize the STC count with a STC (PCR is recovered from the data stream at the receiver 12 and used to synchronize the receiver's version of the system clock 55 to the emission station's system clock i.e. count initialization on PCR), the demux further configured to extract ES (elementary stream) data for a program data packet of the transport stream (Fig. 1b)(Col. 4, lines 53-68; Col. 5, lines 1-28);

a buffer temporarily storing the extracted ES data, the buffer playing a role in buffering between the transmission bit rate and a decoding frame rate(Fig. 1b)(Col. 6, lines 30-43; Col. 10, 57-67; Col. 11, lines 1-21); and

a decoder adjusting DTS (decoding timestamp) according to the predetermined playback mode of the output control unit, and decoding the ES data outputted from the buffer (Fig 1b) (Fig. 4)(Fig. 6) (Col. 10, lines 42-67)(Col. 11, 1-60).

Hallberg does not expressly disclose the buffer outputting a buffer status to the transmission control unit and the decoder configured to control a decoding time point by comparing a difference between the adjusted DTS and the STC count value to a reference time.

Guttman discloses the buffer (Buffer 70_1) outputting a buffer status (status signal) to the transmission control unit (control unit 76) (Col 10, line 36-53).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg with the teachings of Guttman. Motivation to combine would have been to provide status information of the decoding buffer so that data is not lost by overflowing of the buffer.

Hallberg and Guttman do not expressly the decoder configured to control a decoding time point by comparing a difference between the adjusted DTS and the STC count value to a reference time.

Greg discloses the decoder configured to control a decoding time point by comparing a difference between the adjusted DTS (DTS) and the STC count value (PCR) to a reference time (a time before decoding commences) (Page 41).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg and Guttman with the teachings of Greg. Motivation to combine would have been to render a decoding time so that proper decoding could be implemented so that desired video sequence could be output.

As to claim 5 and 14, Hallberg, Guttman and Greg as modified disclose everything claimed as applied in claim 1 above. Hallberg further discloses wherein the transmission control unit outputs a PCR value of a next picture following a picture to be played back as a PCR value to be transmitted for the STC count initialization in case of an N-times speed reverse trick play mode (Fig. 4)(Fig. 6)(Col. 10, lines 42-67)(Col. 11, 1-60)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claims 6 and 15, Hallberg, Guttman and Greg as modified disclose everything claimed as applied in claim 1 above. Hallberg further discloses wherein if a

playback mode and a first picture to be played back are determined, the demux initialize

the STC count becoming a reference of the decoding time point with a PCR value of

the determined picture and an STC count is then synchronized with the STC according

to a playback direction to be sequentially incremented (Fig. 4)(Fig. 6)(Col. 5, lines 1-

29)(Col. 7, lines 39-67;Col. 8, lines 1-3).

As to claims 7, 16 and 18, Hallberg, Guttman and Greg as modified disclose

everything claimed as applied in claim 1 above. Hallberg further discloses where in

decoder is configured to increment count in case of a forward trick play (Figs. 4 and 6;

Col. 9, lines 40-61; Col. 10 lines 42-60)

As to claim 8, Hallberg discloses digital video record/playback apparatus

comprising: a record control unit only selecting transport packets corresponding to a

program to be stored in a transport stream, the record control unit extracting picture

information and PCR (program clock reference) of the program to be Used in playback

(Fig. 1b)(Col 5, lines 1-30);

a storage medium storing the transport packets of the program selected in the record

control unit, the picture information, and the PCR of the selected program;

an output control unit outputting a predetermined playback mode (Col. 3, lines 39-63);

a transmission control unit controlling a transmission bit rate and transmission time point

of the transport stream based on the predetermined playback mode and a buffer.(Fig.

1b)(Col. 6, lines 43-68; Col. 7, lines 1-26);

a demux performing an STC (system time clock) count initialization (PCR value is

recovered and used to synchronize system clock 55 with system clock 33; Fig. 6, 206)

on a PCR (program clock reference) packet of the transport stream inputted via the

transmission control unit, the demux configured to synchronize the STC count with a

STC (PCR is recovered from the data stream at the receiver 12 and used to

synchronize the receiver's version of the system clock 55 to the emission station's

system clock i.e. count initialization on PCR), the demux further configured to extract ES

(elementary stream) data for a program data packet of the transport stream (Fig.

1b)(Col. 4, lines 53-68; Col. 5, lines 1-28);

a buffer temporarily storing the extracted ES data, the buffer playing a role in buffering

between the transmission bit rate and a decoding frame rate(Fig. 1b)(Col. 6, lines 30-

43; Col. 10, 57-67; Col. 11, lines 1-21); and

a decoder adjusting DTS (decoding timestamp) according to the predetermined

playback mode of the output control unit, and decoding the ES data outputted from the

buffer (Fig 1b) (Fig. 4)(Fig. 6) (Col. 10, lines 42-67)(Col. 11, 1-60).

Hallberg does not expressly disclose the buffer outputting a buffer status to the

transmission control unit and the decoder configured to control a decoding time point by

comparing a difference between the adjusted DTS and the STC count value to a

reference time.

Guttman discloses the buffer (Buffer 70_1) outputting a buffer status (status signal)

to the transmission control unit (control unit 76) (Col 10, line 36-53).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art to combine Hallberg with the teachings of Guttman. Motivation to combine

would have been to provide status information of the decoding buffer so that data is not lost by overflowing of the buffer.

Hallberg and Guttman do not expressly the decoder configured to control a decoding time point by comparing a difference between the adjusted DTS and the STC count value to a reference time.

Greg discloses the decoder configured to control a decoding time point by comparing a difference between the adjusted DTS (DTS) and the STC count value (PCR) to a reference time (a time before decoding commences) (Page 41).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg and Guttman with the teachings of Greg. Motivation to combine would have been to render a decoding time so that proper decoding could be implemented so that desired video sequence could be output.

As to claim 17, Hallberg discloses a playback method in a digital video record/playback apparatus, comprising:

a step (a) of storing transport packets of a selected program, picture information, and PCR (program clock reference) of the selected program (fig. 1b)(Fig. 4)(Fig. 6)((Col. 5, lines 1-29);

a step (b) of performing STC (system time clock) count initialization (PCR value is recovered and used to synchronize system clock 55 with system clock 33; Fig. 6, 206) using a value of the stored PCR and synchronizing the STC count with a STC according to a direction (Col. 9, lines 40-61) of a trick play mode (Fig. 1b) (Fig. 4)(Fig. 6)(Col. 7, lines 39-67;Col. 8 lines 1-27) (Col. 4, lines 53-68; Col. 5, lines 1-28);

a step (c) of adjusting DTS (decoding timestamp) of a picture to be decoded according

to the direction and multiple- times speed of the trick play mode(Fig. 4)(Fig. 6)(Col. 7,

lines 39-58)(Col. 11, lines 21-60); and a step (d) and decoding by referring to the picture

information according to the trick play mode (Col. 9, lines 40-61)

Hallberg does not expressly disclose a step (d) of decoding to output picture

data of the selected program by controlling a difference between the adjusted DTS and

the STC count to a reference value.

Greg discloses a step (d) of decoding to output picture data of the selected

program by controlling a difference between the adjusted DTS (DTS) and the STC

count (PCR) to a reference value (a time before decoding commences) (Page 41).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art to combine Hallberg with the teachings of Greg. Motivation to combine would

have been to render a decoding time so that proper decoding could be implemented so

that desired video sequence could be output.

3.   Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent 6,658,199 B1 to Hallberg in view of U.S. Patent 7,031,259 to

Guttman et al. "Guttman" and in view of An MPEG-2 digital decoder design to

Greg Reig "Greg" and in further view of U.S. Patent 6,453,116 B1 to Ando et al.

"Ando".

As to claim 9, Hallberg, Guttman and Greg as modified disclose everything

claimed as applied in claim 1 above. However Hallberg, Guttman and Greg as modified

do not expressly disclose wherein the record control unit stores information of a location

where a picture is stored, information of a location where a PCR value of the picture is stored, and each picture type in the storage medium, wherein the record control unit stores associative relation to the location information of the picture recorded in the storage medium by searching index information of the picture type, and wherein a time stamp is not stored in the storage medium.

Ando teaches wherein the record control unit stores information of a location where a picture is stored, information of a location where a PCR value of the picture is stored, and each picture type in the storage medium, wherein the record control unit stores associative relation to the location information of the picture recorded in the storage medium by searching index information of the picture type, and wherein a time stamp is not stored in the storage medium (Fig. 1)(Col. 33, lines 40-57)(Col. 6, lines 63-66)(Col. 36, lines 63-67; Col. 37, lines 1-6).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg, Guttman and Greg as modified with the teaching of Ando. Rationale would have been that all claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claim 10, Hallberg, Guttman and Greg as modified disclose everything claimed as applied in claim 1 above. However Hallberg, Guttman and Greg as modified do not expressly disclose wherein the storage medium has a large capacity of storing digital video streams and is randomly accessible.

Ando teaches wherein the storage medium has a large capacity of storing digital video streams and is randomly accessible (Col. 1. lines 53-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Hallberg, Guttman and Greg as modified with the teaching of Ando. Motivation would have been in order to provide a recording medium that allows a

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHER KHAN whose telephone number is (571)270-5203. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Marsha Banks- Harold can be reached on (571)272-7905. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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/Marsha D. Banks-Harold/
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